

Comments on Proceeding RM-10371

Petition for Rulemaking To Permit Unlicensed National Information Infrastructure Devices To Operate in the 5.470-5.725 GHz

I have been a Ham for twenty-five years (WA4OSH) and more recently, a Consulting Systems Engineer with interests in Radio Local Area Networks. I am also a hobbyist active in a 'Freenetwork' in Colorado called Mile High Wireless.

I must admit that offering an opinion on a Petition for Rulemaking to allow U-NII to increase its allocation is difficult to make. However, my opinion comes from what I see is best for the most people rather than being slanted towards one group or another.

The current use of the spectrum is inefficient

There is a saying... "Use it or lose it." There are hardly ready made ham equipment or a lot of surplus equipment for hams to use the 5.650-5.725 Ghz band. I have only read about a few rare mountain top contacts on these microwave bands in QST and 73 Magazine. Admittedly, it's very difficult to homebrew equipment for that band and honestly, the Ham Band is a huge amount of spectrum carrying nothing but static.

Albeit, now that IEEE 802.11a equipment is available, there exists the very real possibility for Hams to modify this equipment and use the 5.650-5.725 Ham band, but it may not be easy. Hams may actually benefit from having equipment commercially available at low cost to operate on this band.

Maritime Radio Location services (5.470-5.650 Ghz) obviously don't operate on dry land. Reserving this spectrum on dry land seems senseless.

With the U-NII expansion, all parties can benefit

I think the band would be much better off for all groups if the U-NII band was expanded.

With the additional allocation of the 5.470-5.725 allocation, vendors of Hiperlan2 could sell their wares world-wide. Higher quantities of product would further lower the price of such equipment. To produce dual-standard (Hiperlan2 and IEEE 802.11a) equipment is also feasible.

Having off-the shelf equipment would allow Hams to use their portion from 5.650-5.725 Ghz band for high-speed point to point and point to multipoint uses such as backbones for existing packet systems. Hams would of course be allowed to use the same equipment with higher gain antennas and amplifiers if necessary.

The 5.470-5.650 Ghz band which is currently used by Maritime Radio location could be used perhaps as a high power allocation useful for point to point and point to multi-point use inland where there are no Maritime users. In areas near where Maritime Radio Location is used, a more responsible way of sharing the band would be the use of directional antennas. By using directional antennas, although resulting in higher EIRP, signals can be better guided and kept from interfering. There is, however, potential of interference in areas where this band is used by Maritime Radio Location if not properly coordinated.

Voluntary Frequency Coordination is Key

The key to making it work under part 15 for everyone is effective voluntary frequency coordination and actually limiting the proposed additional U-NII spectrum's power wherever necessary. This way, one can more effectively shield licensed users from harmful interference.

Merits of Non-Commercial Spectrum

The existing U-NII band has the potential of delivering broadband data where the commercial carriers have failed with Fiber to the Home, DSL, Cable, Wireless Cable and other broadband venues. The new bands will help meet the need for commercially viable license-free spectrum so that small ISPs can effectively compete against the

telephone companies which own the means to deliver broadband (DSL, Cable and most cellular and PCS allocations).

However, in many places the commercial efforts of new companies like Boingo, SurfandSip, Wayport, HereUare, and large telecoms like Sprint and VoiceStream are already deploying their networks nationwide and soon there will be little spectrum left for hobbyists to get their chance at deploying their own non-commercial wireless networks.

I think the proposed additional U-NII spectrum should have the restriction that it can only be used for non-commercial purposes (the way Hams are limited to carrying only non-commercial traffic). Thus, no fee should be charged for access to this spectrum by any commercial enterprise. This arrangement should not preclude an ISP from providing Internet gateway services. This would help guarantee spectrum for "Freenetworks" which provide low cost and free Internet access, and for individuals to use within or between their homes or apartments. (A freenetwork is an exercise in telecommunications freedom. A network created by those who use it rather than brought to consumers by business. It is not necessarily 'free' as in cost, but more to the point, autonomous and self governing.) Think of it as public radio for the U-NII band.

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Links to Free Networks

<http://www.freenetworks.org>
<http://www.personaltelco.net>
<http://www.milehighwireless.net>